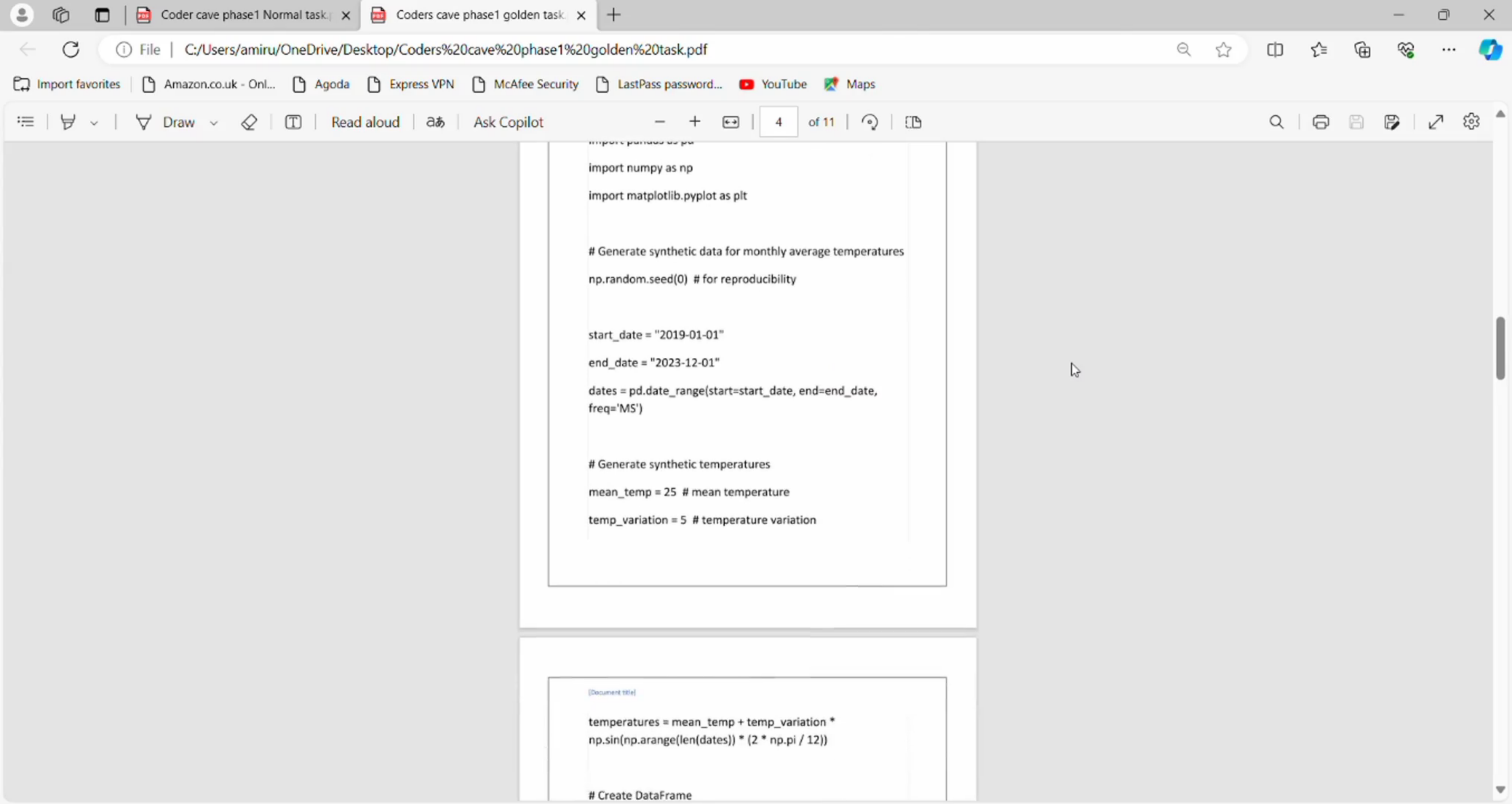
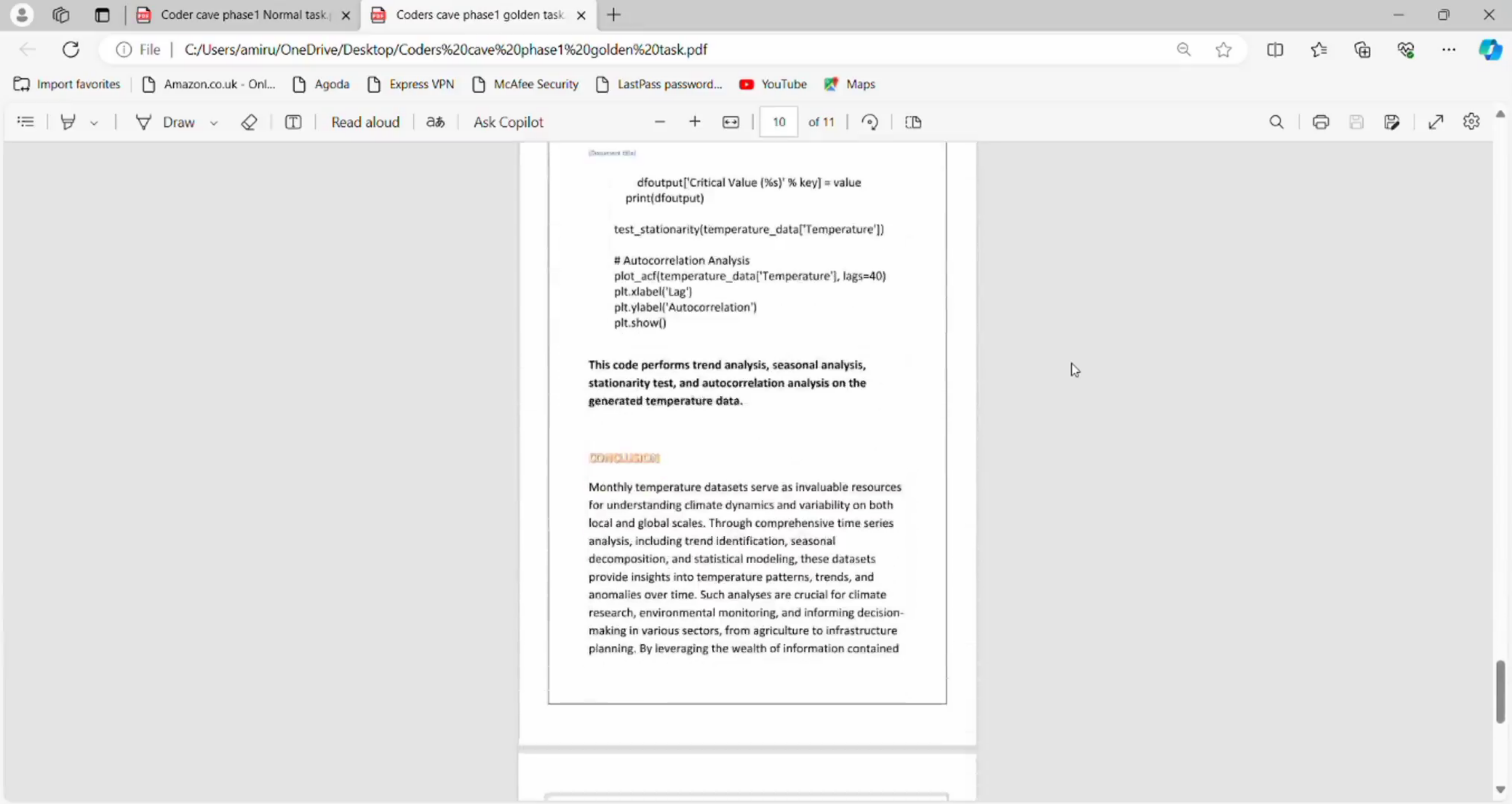


[Document title]

GOLDEN TASK

**Choose a dataset with a time component
and perform time series analysis**





```
dfoutput['Critical Value (%)' % key] = value
print(dfoutput)

test_stationarity(temperature_data['Temperature'])

# Autocorrelation Analysis
plot_acf(temperature_data['Temperature'], lags=40)
plt.xlabel('Lag')
plt.ylabel('Autocorrelation')
plt.show()
```

This code performs trend analysis, seasonal analysis, stationarity test, and autocorrelation analysis on the generated temperature data.

CONCLUSION

Monthly temperature datasets serve as invaluable resources for understanding climate dynamics and variability on both local and global scales. Through comprehensive time series analysis, including trend identification, seasonal decomposition, and statistical modeling, these datasets provide insights into temperature patterns, trends, and anomalies over time. Such analyses are crucial for climate research, environmental monitoring, and informing decision-making in various sectors, from agriculture to infrastructure planning. By leveraging the wealth of information contained

